



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,422	11/24/2003	Eugene O. Curatu	2154US	5114
26356	7590	01/25/2006	EXAMINER	
ALCON RESEARCH, LTD. R&D COUNSEL, Q-148 6201 SOUTH FREEWAY FORT WORTH, TX 76134-2099			PHAM, HOA Q	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/720,422	CURATU, EUGENE O.	
	Examiner	Art Unit	
	Hoa Q. Pham	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/1/04&9/30/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. The drawings are objected to because the “drawings lines” are so blur and the “numbers” are in handwriting. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2877

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 7-8, 11-14, 17, 20, 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Martino (6,637,884).

Regarding claims 1, 12, 20; Martino discloses an aberrometer calibration comprises an optical element (32) insertable into an optical path (40) of a wavefront analyzer (10), the optical element (32) adapted to induce a predetermined aberration in a wavefront for presentation to the wavefront analyzer (figure 2, column 3, line 63 through column 4, line 25).

Regarding claim 7, see column 4, lines 3 for the use of test lens (32).

Regarding claim 8, see figure 3 for the use of test lenses (44,46,32).

Regarding claims 11 and 14, see figure 2 for the use of reflective optical element (32,33).

Regarding claims 13 and 22, figure 2 shows a collimated lens (14).

Regarding claim 17, column 3, line 1, teaches the use of a Shack-Hartmann aberrometer.

4. Claims 1, 11-14, 17, 20, 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Williams et al (6,379,005) (of record).

Art Unit: 2877

Regarding claims 1, 12, 20; Williams et al discloses a method and apparatus for improving vision and the resolution of retinal images comprises an optical element (118) insertable into an optical path of a wavefront analyzer (column 4, lines 22-23), the optical element (118) adapted to induce a predetermined aberration in a wavefront for presentation to the wavefront analyzer (figure 1, column 4, line 26 through column 8, line 11).

Regarding claims 11 and 14, see column 7, lines 27-28, for the use of a reflective deformable mirror (118).

Regarding claims 13 and 22, figure 1 shows the use of a collimated lens (12).

Regarding claim 17, column 3, line 3, teaches the use of a Shack-Hartmann aberrometer.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-6, 9, 10, 15-16, 18-19, 21, 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martino.

Regarding claims 2, 3, 5, 6, 9, 15-16, 26, 28-29; Martino teaches that the calibration component comprises a well characterized test optic or model eye having a known wavefront aberration, or having known plus or minus dioptric power and the

Art Unit: 2877

desired measurement parameter is a **refractive** calibration (column 2, lines 5-31).

Martino does not explicitly teach the use of a hologram; however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use any types of calibration component, for example, a hologram as now claimed by the present invention, because it does not matter what types of calibration components, the device would function in the same manner.

Regarding claims 4 and 27, Martino teaches that the information is processed and typically fit to Zernike polynomials to output the aberration coefficients measurements (column 3, lines 23-27).

Regarding claims 18-19, 23-24; Martino teaches calibration component for calibrating a Shack-Hartmann type wavefront sensing device (column 1, lines 29-35 and column 3, line 1) and does not disclose a details of the Shack-Hartmann device. However, such a structure is well known in the art. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the basic device of Martino for calibrating any types of Shack-Hartmann device, for example, a Shack-Hartmann device claimed by the present invention, because the steps of calibration are similar.

Regarding claims 10, 21 and 25; Martino teaches that the term "dioptric power" as used herein refer to (+/-) spherical defocus measured in diopters as is produced by a spherical convex lens or concave lens.

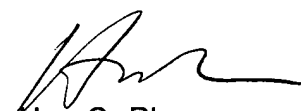
Art Unit: 2877

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Altmann (6,739,721) discloses a method and apparatus for calibrating and certifying accuracy of wavefront sensing device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa Q. Pham whose telephone number is (571) 272-2426. The examiner can normally be reached on 7:30AM to 6 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Hoa Q. Pham
Primary Examiner
Art Unit 2877

HP
January 21, 2006